WHAT IS CLAIMED IS:

1. A surface acoustic wave filter comprising series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1\times10^6 \leqq 4\pi^2 f_0^2 R^2 CopCos \leqq 3.1\times10^6$$

where Cop is an electrostatic capacitance of the parallel-arm resonators, Cos is an electrostatic capacitance of the series-arm resonators, f_0 is a center frequency, and R is a nominal impedance.

2. A surface acoustic wave filter comprising series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1.3\times10^6 \leqq 4\pi^2 f_0^2 R^2 CopCos \leqq 3.1\times10^6$$

where Cop is an electrostatic capacitance of the parallel-arm resonators, Cos is an electrostatic capacitance of the series-arm resonators, f_0 is a center frequency, and R is a nominal impedance.

3. A surface acoustic wave filter comprising series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1.6\times10^6 \leqq 4\pi^2 f_0^2 R^2 CopCos \leqq 2.9\times10^6$$

where Cop is an electrostatic capacitance of the

parallel-arm resonators, Cos is an electrostatic capacitance of the series-arm resonators, f_0 is a center frequency, and R is a nominal impedance.

4. The surface acoustic wave filter as claimed in claim 1, wherein the ratio Cop/Cos of the electrostatic capacitance Cop to the electrostatic capacitance Cos is 0.5.

5. The surface acoustic wave filter as claimed in claim 1, wherein at least comb-like electrodes in the series-arm resonators and the parallel-arm resonators are covered with a dielectric film.

6. The surface acoustic wave filter as claimed in claim 1, wherein the center frequency f_0 is in the 5 GHz band.

7. The surface acoustic wave filter as claimed in claim 1, wherein the series-arm resonators and the parallel-arm resonators are connected to form a four-stage structure.

8. A filter device comprising:

a surface acoustic wave filter: and

a package to which the surface acoustic wave filter is mounted by a wire bonding technique,

the surface acoustic wave filter including series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1\times10^6 \leqq 4\pi^2 f_0^2 R^2 CopCos \leqq 3.1\times10^6$$

where Cop is an electrostatic capacitance of the parallel-arm resonators, Cos is an electrostatic

capacitance of the series-arm resonators, f_0 is a center frequency, and R is a nominal impedance,

the package having a signal terminal connected to signal electrodes of the surface acoustic wave filter with one bonding wire, and

the bonding wire having an inductance Li that satisfies conditions expressed as:

$$0.7 \leqq Li \leqq 1.3.$$

9. A filter device comprising:

a surface acoustic wave filter: and

a package to which the surface acoustic wave filter is mounted by a wire bonding technique,

the surface acoustic wave filter including series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1.3\times10^6 \leqq 4\pi^2 f_0^2 R^2 CopCos \leqq 3.1\times10^6$$

where Cop is an electrostatic capacitance of the parallel-arm resonators, Cos is an electrostatic capacitance of the series-arm resonators, f_0 is a center frequency, and R is a nominal impedance,

the package having a signal terminal connected to signal electrodes of the surface acoustic wave filter with one bonding wire, and

the bonding wire having an inductance Li that satisfies conditions expressed as:

$$0.7 \leqq Li \leqq 1.3.$$

10. A filter device comprising:

a surface acoustic wave filter: and

a package to which the surface acoustic wave

filter is mounted by a wire bonding technique,

the surface acoustic wave filter including series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1.6\times10^{6} \leqq 4\pi^{2}f_{0}^{2}R^{2}CopCos \leqq 2.9\times10^{6}$$

where Cop is an electrostatic capacitance of the parallel-arm resonators, Cos is an electrostatic capacitance of the series-arm resonators, f_0 is a center frequency, and R is a nominal impedance,

the package having a signal terminal connected to signal electrodes of the surface acoustic wave filter with one bonding wire, and

the bonding wire having an inductance Li that satisfies conditions expressed as:

$$0.7 \leqq Li \leqq 1.3.$$

11. A filter device comprising:

a surface acoustic wave filter: and

a package to which the surface acoustic wave filter is flip-chip mounted,

the surface acoustic wave filter including series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1\times10^{6} \leqq 4\pi^{2}f_{0}^{2}R^{2}CopCos \leqq 3.1\times10^{6}$$

where Cop is an electrostatic capacitance of the parallel-arm resonators, Cos is an electrostatic capacitance of the series-arm resonators, f_0 is a center frequency, and R is a nominal impedance,

the package having a signal line formed by a microstrip line, and

the microstrip line having an inductance Li that satisfies conditions expressed as:

$$0.7 \leqq Li \leqq 1.3.$$

12. A filter device comprising:

a surface acoustic wave filter: and

a package to which the surface acoustic wave filter is flip-chip mounted,

the surface acoustic wave filter including series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1.3\times10^{6} \leqq 4\pi^{2}f_{0}^{2}R^{2}CopCos \leqq 3.1\times10^{6}$$

where Cop is an electrostatic capacitance of the parallel-arm resonators, Cos is an electrostatic capacitance of the series-arm resonators, f_0 is a center frequency, and R is a nominal impedance,

the package having a signal line formed by a microstrip line, and

the microstrip line having an inductance Li that satisfies conditions expressed as:

$$0.7 \leqq Li \leqq 1.3.$$

13. A filter device comprising:

a surface acoustic wave filter: and

a package to which the surface acoustic wave filter is flip-chip mounted,

the surface acoustic wave filter including series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1.6\times10^{6} \leqq 4\pi^{2}f_{0}^{2}R^{2}CopCos \leqq 2.9\times10^{6}$$

where Cop is an electrostatic capacitance of the parallel-arm resonators, Cos is an electrostatic capacitance of the series-arm resonators, f_0 is a center frequency, and R is a nominal impedance,

the package having a signal line formed by a microstrip line, and

the microstrip line having an inductance Li that satisfies the conditions expressed as:

$$0.7 \leqq Li \leqq 1.3.$$

14. The filter device as claimed in claim 8, wherein the ratio Cop/Cos of the electrostatic capacitance Cop to the electrostatic capacitance Cos is 0.5.

15. The filter device as claimed in claim 8, wherein at least comb-like electrodes in the series-resonators and the parallel-resonators are covered with a dielectric film.

16. The filter device as claimed in claim 8, wherein the center frequency f_0 is in the 5 GHz band.

17. The filter device as claimed in claim 8, wherein the series-arm resonators and the parallel-arm resonators are connected to form a four-stage structure.

18. The filter device as claimed in claim 8, wherein the package is made of ceramics.